

Remarks

The Applicants have added new Claims 10 – 15 to claim important subject matter of the invention. New Claim 10 recites that the shape of the repetitive patterns is tray-shaped, carrier belt-shaped or cup container-shaped. Support may be found in the last paragraph of page 7 of the Specification. Claim 11 recites that glass transition temperature is between 220 and 300°C. Support may be found in the second to last paragraph of page 7. Claim 12 recites that the elongation break is from 300 to 800%. Support may be found in the second to last paragraph of page 7.

Claim 13 recites that the polyimide resin is a condensate of a carboxylic acid anhydride and a diamine. Support may be found generally, beginning in the middle of page 5 and extending to the top of page 7. New Claim 14 depends from Claim 13 and recites specific anhydrides. Such anhydrides may be found in the paragraph spanning pages 5 and 6 of the Specification. Similarly, Claim 15 depends from Claim 13 and specifies selected diamines. Those diamines may be found in the paragraph spanning pages 6 and 7 of the Specification. No new matter has been added. Examination on the merits is respectfully requested.

The Applicants acknowledge the 35 U.S.C. §112 rejection of Claims 1 and 13. The Applicants respectfully submit that the phrase “a plurality of repetitive patterns” is fully understandable to those of ordinary skill in the art. The Applicants first invite the Examiner’s attention to page 9 of the Specification in the last two lines, wherein a sheet of polyimide is formed to have a pattern of plural moldings, preferably finished in one vacuum-forming operation. Thus, those of ordinary skill in the art understand that a sheet of polyimide, in accordance with the invention, contains a plurality or multiplicity of moldings that are set forth in a pattern. Such a pattern can be any type of pattern including rows of moldings as an example. Also, the mold shapes may be different as recited in the last paragraph of page 7 such that the plurality of mold shapes may

be tray-shaped, carrier belt-shaped or cup container-shaped.

The Applicants' prior amendment provided a representative example of a plurality of patterns formed in a polyimide sheet. That diagram was merely exemplary and not intended to specify a particular pattern or that there is a requirement for a particular pattern.

The Applicants respectfully submit that one of ordinary skill in the art can readily understand the meaning of a plurality of repetitive patterns. Withdrawal of the §112 rejection is respectfully requested.

The Applicants acknowledge the 35 U.S.C. §102 rejection of Claims 1 and 3 as being anticipated by Sado. The Applicants have amended Claim 1 to recite that the molding has a ratio of depth to opening between 1.0 and 3.0. (Claim 3 has been amended in view of the amendment to Claim 1.) Sado simply fails to disclose this. In sharp contrast, Sado discloses a single set of numbers based on Example 1 from which a ratio of depth to opening can be calculated. Specifically, at Column 6, lines 56 – 58, Sado discloses a depth of 50 mm and a diameter of 100 mm. This results in a ratio of depth to opening of 0.25. This is far outside of the claimed range. In fact, on the low end of the claimed range, the Sado ratio is four times smaller. On the upper end of the claimed range, the Sado ratio is nearly 20 times smaller. The Applicants accordingly respectfully request withdrawal of the §102 rejection of Claims 1 and 3.

The Applicants acknowledge the 35 U.S.C. §103 rejection of Claims 1 and 3 based on the hypothetical combination of Voaden with Sado. The Applicants respectfully submit that, even if one of ordinary skill in the art were to make the hypothetical combination as set forth in the Official Action, the resulting structure would still fail to teach or suggest the invention as recited in the solicited claims. For example, assuming *arguendo* that one of ordinary skill in the art would look to Voaden and attempt to make a plurality of repetitive patterns in a polyimide molding as suggested

in the Official Action, the resulting molding would still fail to teach or suggest a ratio of depth to opening between 1.0 and 3.0. Careful scrutiny of the entire Voaden text reveals that it only discloses thickness measurements and not depth measurements or opening measurements. Voaden discloses that “This pattern may be repeatable or non-repeatable throughout the complete polyimide sheet. The deformation 6 may vary in shape, density and depth.” However, Voaden does not disclose a level of the depth, that is a ratio of depth to opening. Voaden is, therefore, inherently capable of disclosing a ratio of depth to opening, much less the claimed ratio of depth to opening between 1.0 and 3.0%.

Inasmuch as Voaden fails to teach or suggest a ratio of depth to opening between 0.7 and 5.0, hypothetically combining that disclosure with Sado will not cure the fundamental deficiency of Sado that also does not disclose the claimed ratio of depth to opening. As noted above, Sado provides a precise example from which a ratio may be calculated, that calculated ratio being 0.25.

In the context of §103, Sado does state, in Column 5, at lines 49 – 51, that there is no specific limitation to the shape or form and dimensions of the concavity or convexity in the sheet. However, there are utterly no teachings or suggestions to those of ordinary skill in the art that the specifically disclosed dimensions should or could be changed or that any benefit would be gained by so doing. Also, inasmuch as Sado is limited to a single concavity or convexity, there is no appreciation for the complications caused by employing a multiplicity of repetitive patterns and how they might influence the characteristics of the overall polyimide molding.

Said differently, it would first be necessary for one of ordinary skill in the art to modify Sado by looking to Voaden to provide a multiplicity of moldings in a single sheet. Then, it would be further necessary to modify Sado a second time, not based on Voaden and not based on any teachings or suggestions in Sado to do so, to provide a ratio of depth to opening between 1.0 and 3.0, which

is simply neither taught nor suggested. Moreover, careful scrutiny of the entire Sado disclosure reveals that there is nothing to motivate one of ordinary skill in the art to make such a second modification. At best, the language in Column 5 of Sado would make it “obvious to try” other shapes and/or dimensions with no teachings or suggestions to do so and no teachings or suggestions as to any benefit that could or would be gained by so doing. Of course, “obvious to try” has been forbidden by the Federal Circuit for many, many years. Therefore, the Applicants respectfully submit that a hypothetical combination of Voaden with Sado still does not support a rejection of Claims 1 and 3 under §103. Withdrawal of the §103 rejection is respectfully requested.

In light of the foregoing, the Applicants respectfully submit that the entire Application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,



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